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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/227,490	01/06/1999	MATTHEW DAVIS GARD	35684.0101(P)	8191

7590
06/04/2003
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EXAMINER

LANEAU, RONALD

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 06/04/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/227,490

Applicant(s)

GARD, MATTHEW DAVIS

Examiner

Ronald Laneau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,9,10,13,14,17,18,21,22,25,26,29 and 30 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24, 27, 28, 31, and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Prosecution Application

1. The request filed on 2/14/03 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/227,490 is acceptable and a CPA has been established. An action on the CPA follows.

Claim Objections

2. Claims 1, 5, 17, and 21 are objected to because of the following informalities:

In claim 1, lines 3, "one conductor arrays" should be --one conductor array--, line 5, line 6, and line 8 "wherein said conductor arrays" should be --wherein said conductor array--, line 10, "wherein the conductors" should be --wherein the first, second, and third conductors--.

In claim 5, line 4, "one said conductor arrays" should be --one said conductor array--, line 6, conductor arrays should be --said conductor array--, line 7, line 8, and line 10 "wherein said conductor arrays should be --wherein said conductor array--, line 12, "wherein the conductors" should be --wherein the first, second, and third conductors--.

In claim 17, line 3, "wherein each said conductor array" should be --wherein each of said conductor arrays--.

In claim 21, line 4, "wherein each said conductor array" should be --wherein each of said conductor arrays--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefkowitz et al (4,524,348) in view of Tokumitsu et al (US 5,729,290).

As per claims 1, 5, 9, 13, 17, 21, 25, and 29, Lefkowitz et al teach between a physical object, such as a part of the human body, and a machine. Movement of the physical object in a defined field is sensed, and signals corresponding to such movements are received, detected, amplified and produced as an input signal to the machine to move an element of the machine in the same direction as, and in an amount proportional to, movement of the object (see abstract). Further, Lefkowitz et al teach a three-dimensional effect of the type, a control panel 38 coupled to module 8 through control module 20 by one or more conductors or cables 40 or 42 (col. 4, lines 25-33), an antenna 18 that senses and signals the movement of the hand in the defined field x-axis 26, antenna 30 senses and signals the movement of the hand in the defined field along y-axis 36, and antenna 38 senses and signals the movement of the hand in the defined field along z-axis 44 (see col. 5, lines 36-42). Lefkowitz et al do not teach a converter that translates the sensed movement into vector data but Tokumitsu et al teach an A/D converter 5 which converts image data signal to movement vector data by the movement amount detection 7 which then transfers the movement vector data to the memory (col. 4, lines 24-27).

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It would have been obvious to one of ordinary skill in the art to utilize the converter taught by Tokumitsu et al into the device of Lefkowitz et al because the use of vector data rather than coordinate data would reduce the storage requirement for processing image data.

As per claims 2, 6, 10, 14, 18, 22, 26, and 30, Tokumitsu et al teach a converter which is able to determine a change in voltage as claimed.

Allowable Subject Matter

5. Claims 3, 4, 7, 8, 11, 12, 15, 16, 19, 20, 23, 24, 27, 28, 31, and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the references, either singularly or in combination, teaches or even suggests:

As per claims 3, 4, 11, 12, 19, 21, 31, and 32, an apparatus wherein said converter comprises circuitry to measure the change in the frequency of a first oscillator electrically coupled to said first conductor and a second oscillator electrically coupled to a second conductor.

As per claims 7, 8, 22, and 23, a method wherein said step of providing a converter further comprises providing circuitry to measure the change in frequency of a first oscillator which is electrically coupled to said first conductor and a second oscillator which is electrically coupled to said second conductor.

As per claims 15, 16, 27, and 28, a program storage device wherein said step of translating further comprises measuring the change in frequency of a first oscillator electrically coupled to said first conductor and a second oscillator electrically coupled to said second conductor.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Laneau whose telephone number is 703-305-3973. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:00 PM or via email: ronald.laneau@uspto.gov.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached at 703-305-4709.

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ronald Laneau
Examiner
Art Unit 2674

rl
May 29, 2003



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600